# **Assessment Criteria 6.1.7**SundaHus Material Data

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## 2 Introduction

SundaHus Material Data is a system used for conscious material choices in order to ensure a non-toxic and long-term valuable building. It is a tool for minimizing the presence of hazardous substances in connection with construction and management of real estate property, as well as for documenting product choices. Through a documentation of chemical substances, the system creates the foundation for a systematic approach to monitoring the contents of a building over time.

The system offers various services and functions for the following building phases:

- Environment Program
- Planning
- Building
- Maintenance
- Demolition

The assessment of products is based on the supplier's documentation and the SundaHus assessment criteria, most of which are based on the European Parliament and Council Regulation (EC) No 1272/2008, and the Swedish Chemicals Agency Priority Guide PRIO. As a reference for information on chemical substances, the European Chemicals Agency (ECHA) C&L Inventory database with basic classification data on notified and registered substances is used firstly followed by the Prevent Chemical Substances database.

Assessments are carried out by SundaHus chemists, who review product content information and request additional information if necessary. This work is supported by a combination of their assessment experience, integrated system support and checklists that together form suggestions on what content to expect in different product groups and therefore what assessment to assign the products.

This document describes the assessment criteria for SundaHus Material Data.



# 3 Description of the assessments

The assessment of products is based on various properties and divided into five levels D, C-, C+, B or A where A is the best.

The following is a description of what each letter represents:

#### A: Products that:

- 1. have minimal health or environmental impacts associated with the PRIO properties defined in the Swedish Chemicals Agency Priority Guide PRIO (e.g. carcinogenic, toxic to reproduction, endocrine disruptors, allergens etc.)
- 2. are not classified as hazardous to health or the environment during the construction phase
- 3. do not affect the indoor environment negatively through high emissions of volatile organic compounds
- 4. give minimal contribution to smog formation
- 5. do not emit excessive levels of formaldehyde (i.e. E1 class compliant)
- 6. provide a minimal strain on natural resources and less material to landfill deposits
- 7. have a long service life (for selected product groups)
- 8. are not likely to contribute to unsustainable forestry
- 9. have good transparency regarding the product contents

**B**: Products that do not qualify for A and do not match the criteria for C+ and/or C-.

**C+:** Products for which workers, nearby communities and the environment risk exposure to substances of very high concern used for the manufacture of polymers.

#### C-: Products that:

- could lead to an exposure to substances with PRIO properties (e.g. carcinogenic, toxic to reproduction, endocrine disruptors, allergens)
- 2. could lead to exposure to substances with other toxic properties
- 3. risk affecting the indoor environment negatively through high emissions of volatile organic compounds
- 4. contribute to smog formation through emissions of volatile organic compounds with high photochemical ozone creation potentials
- 5. contain substances or are produced with substances that at very low emissions can have a big impact on the climate
- 6. risk contributing to unsustainable forestry

**D:** Products which cannot be assessed due to insufficient documentation (see Table 1).

A summary of the conditions that apply to each assessment are listed in Table 2.



#### 4 Assessment criteria

The products are divided into two groups. In some cases the different groups have separate assessment criteria.

The product groups are:

- Chemical products<sup>1</sup>
- Other products

# 4.1 General principles for the assessments

# 4.1.1 Content reporting requirements

The content of products must be declared and documented to ensure that there is a good foundation for environmentally conscious choices. The content reporting requirements described in section 4.2.5 and summarized in Tables 1 and 2 apply to all products assessed in SundaHus Material Data. Products that do not meet the minimum content reporting requirements will receive a D-assessment (described in points 3 and 4 in Table 1).

#### 4.1.2 Assessment of the contents

The product contents are assessed according to the chemical properties of the constituent substances. Section 5 describes how different characteristics weigh into the assessments. The general principle is that products that do not have negative properties that lead to a C + or C- rating and that do not qualify for an A-assessment, receive a B rating.

## 4.2 Assessment policy

#### 4.2.1 Classification of substances

- 1. If a substance in a product has a harmonized classification in Annex VI of the CLP regulation (EC) No 1272/2008 that is the classification that will be used in the assessment.
- 2. If a substance does not have a harmonized classification in Annex VI of the CLP regulation (EC) No 1272/2008 and the supplier specifies different hazard statements for the same substance in different documents, we will use those specified in the material safety data sheet.
- 3. If hazard statements are missing in the supplier documentation and the substance is not in Annex VI of the CLP regulation (EC) No 1272/2008, the most commonly notified classifications in the C&L Inventory database will be applied.

<sup>&</sup>lt;sup>1</sup> A chemical product is a chemical substance or a preparation/mixture of chemical substances that are not an article, as defined in REACH, Chapter 2.



## 4.2.2 Assessment of product contents

Our goal with listing the product contents is to present a picture of the possible amount of substances hazardous to health and/or the environment, and not to expose the actual recipe. We therefore show the "maximum amount" as below:

- 1. If the supplier indicates the amount as a range, e.g. 5 15%, we will indicate ≤ 15%. This means that the total sum of the product contents may exceed 100%.
- 2. If the supplier indicates different amounts for the same substances in different documents, we will specify the amount listed in the material safety data sheet, if available. If not, we will use the highest amount specified.

## 4.2.3 Summing of input quantities of substances with the same properties

If several substances with the same properties (e.g. acute toxicity) are present in the same product, their concentrations are summed up for those with a "Yes" in the column "Summing of substance quantities" in Table 2. The summed levels are then checked against the specified content limits in the "Conditions" column. This is a simplified application of the rules for the classification of mixtures of chemicals in the European Parliament and Council Regulation (EC) No 1272/2008 and in the Swedish Chemicals Agency's Classification and Labelling Regulations (KIFS 2005:7).

# 4.2.4 Information requirement for full documentation

The basic principle of composite products is that the amount of the constituent substances in all components is summed and then validated against the criteria in this document. However, there are exceptions to this principle:

#### 4.2.4.1 Products with electronics

Assessing composite electronic products is complex. Electronic components with printed circuit boards contain hazardous substances (eg flame retardants and hazardous metals) and polymers made from hazardous substances (eg epoxy resin). When electronics are included in the assessments, there is a risk that heavier products (with the same amount of electronics) receive a better assessment than light products as electronics make up a smaller proportion of the product in terms of weight. This is despite the fact that the amount of hazardous substances can be exactly the same in both products. In addition, it is currently difficult to substitute the hazardous substances in the electronic components.

To avoid dilution effects, electronics with printed circuit boards will not be considered in the assessments. This change makes it easier to see how substances in other parts of the products (eg flame retardants, monomers, UV stabilizers or hazardous metals in alloys in the casings) affect the assessment of the products. Note, however, that the reporting requirements according to chapter 4.2.5 apply to all contents (including electronic components with printed circuit boards) in these products.

## 4.2.5 Reporting requirements for complete documentation

#### 4.2.5.1 General requirements

Our basic position is that all substances contained in a product should be reported, but this is not always provided. We therefore ask for specific information about the content of products in order to:



- ensure that the assessment process is as thorough as possible, which in turn raises the quality of the building's logbook
- ensure that low product transparency does not benefit any assessment
- ensure that information in the logbook is as comprehensive and transparent as possible

Table 1 describes the documentation that is required for each assessment. Note that Class 3 and 4 lead to the assessment D.

Table 2 describes the content reporting requirements for different chemical properties. Note that the requirements for hazard statements are the same as those for safety data sheets according to the REACH Regulation Article 31 and Annex II of REACH (Regulation (EC) No 1907/2006) and with the amendments set out in Article 59 of the CLP Regulation (EC) No 1272 / 2008 (see ECHAs <u>Guidance on the compilation of safety data sheets</u>).

Table 1. A summary of the type of documentation required for the assessment.

Cl	ass	Chemical product	Other products
1.	Complete documentation, assessment possible (gives assessments A, B, C+ or C- depending on the other assessment aspects)	Documentation requirements:     All chemical products:         Material Safety Data Sheet (valid and not older than 3 years).         Building Product Declaration or other forms of environmental declarations.         A minimum of 99.9 % of the product content is declared.         Information is available on important functional additives at levels lower than 0.1% (e.g. information on preservatives).         At least 99.9% of the content is accessible (i.e. not classified information).	<ul> <li>Documentation requirements:</li> <li>All non-chemical products:</li> <li>Building Product Declaration or other forms of environmental declarations.</li> <li>A minimum of 98 % of the product content is declared.</li> <li>Information is available on important functional additives at levels lower than 2 % (e.g. information on concrete admixtures, plasticizers, flame retardants).</li> <li>At least 98 % of the content is accessible (i.e. not classified information).</li> </ul>
2.	Incomplete documentation, assessment possible (gives assessments B, C+ or C- depending on the other assessment aspects)	Documentation requirements:  Chemical products:  • The product content declaration meets the requirements in Table 2 below. The product content can be reported in safety data sheets and / or other documents (eg e-mails).	Documentation requirements:     Non-chemical products:     The product content declaration meets the requirements in Table 2 below. The product content can be reported in safety data sheets and / or documents (eg e-mails).



Cla	ass	Chemical product	Other products
3.	Incomplete documentation, assessment not possible (always gives assessment D)	Terms:  All chemical products:  Some information is available but it does not fulfill the requirements above.	<ul> <li>Terms:</li> <li>All non-chemical products:</li> <li>Some information is available but it does not fulfill the requirements above.</li> </ul>
4.	Documentation missing. (always gives assessment D)	Terms:  All chemical products:  No information is available on the product content.	Terms:  All non-chemical products:  No information is available on the product content.

Table 2. Requirements for content reporting for different chemical properties

Hazard class and hazard category	Hazard statements	Reporting limit (%)
All substances with specific concentration limits (this overrides the generic cut-off values below)	All hazard statements involved	Specific concentration limits according to sec- tion 3 in appendix VI for the Regulation (EC) No 1272/2008
Acute toxicity, 1,2,3	H300, H310, H330, H301, H311, H331	≥ 0,1
Acute toxicity, category 4	H302, H312, H332	≥ 1
Skin corrosion/irritation, category 1, sub-category 1A, 1B, 1C and category 2	H314, H315	≥1
Serious damage to eyes/eye irritation, category 1 and 2	H318, H319	≥1
Respiratory/skin sensitisation	H334, H317 cat 1, H317 cat 1A, H317 cat 1B	≥ 0,1
Germ cell mutagenicity category 1A and 1B	H340	≥ 0,1
Germ cell mutagenicity category 2	H341	≥ 1
Carcinogenicity category 1A, 1B and 2	H350, H351	≥ 0,1
Reproductive toxicity, category 1A, 1B, 2 and effects on or via lactation	H360, H361, H362	≥ 0,1
Endocrine disruptors: substances included in the European Commission's EDS Database of endocrine disruptors, categories 1 and 2, in the Chemsec SIN List and in the ECHA candidate list of substances of very high concern for Authorisation due to endocrine disrupting properties in accordance with REACH Article 57f.	-	≥ 0,1
Fluorinated greenhouse gases	-	≥ 0,1
Per- and polyfluoroalkyl substances, (PFAS)	-	≥ 0,1



Hazard class and hazard category	Hazard statements	Reporting limit (%)
PBT-substances: substances listes as PBT/vPVB- ämnen in the PRIO database or in ECHAs data- base, C & L Inventory	-	≥ 0,1
Potential PBT/vPvB: Substances listed as potential PVB/vPvB-substances in PRIO and Suspected PBT/vPvB in Community Rolling Action Plan (CoRAP-List).	-	≥1
Specific target organ toxicity (STOT) - single exposure, category 1 and 2	H370, H371	≥1
Specific target organ toxicity (STOT) - single exposure, category 3	Н335, Н336	≥1
Specific target organ toxicity (STOT) – repeated exposure, category 1 and 2	H372, H373	≥1
Aspiration hazard	H304	≥1
Hazardous to the aquatic environment – Acute, category 1	H400	≥ 0,1
Hazardous to the aquatic environment – Chronic, category 1	H410	≥ 0,1
Hazardous to the aquatic environment – Chronic, category 2, 3 and 4	H411, H412, H413	≥1
Hazardous for the ozone layer	H420	≥ 0,1
Unclassified substances	-	2 (per substance)

## 4.2.5.2 Worst-case substances

In addition to the general requirements above on the kind of documentation that is needed for complete product documentation for the assessment, there are specific requirements for specific product groups. In cases where this specific information is missing, we will apply worst-case substances/materials in order to ensure that no critical elements are left out in the assessment. Worst-case substances are those that past experience or literature has shown may be present in particular product types.



# 5 Summary of the assessment criteria

Table 2. SundaHus assessment criteria

Nr	Properties/substance	Conditions	U/R <sup>2</sup>	Summa-	References
	groups			tion of	
				substance	
				quantities	
	D: The product has insufficient documentation for an assessment (see row 3 and 4 in table 1).				
	C-: The product does not have any properties applying to a D assessment, but has one or more of the following characteristics:				

<sup>&</sup>lt;sup>2</sup> **U**: phase-out substances according to the Swedish Chemicals Agency's <u>PRIO-criteria</u>, **R**: priority risk reduction substances according to the Swedish Chemicals Agency's <u>PRIO-criteria</u>.



Nr	Properties/substance groups	Conditions	U/R²	Summa- tion of substance quantities	References
C1	Phase-out substances – chemical products	The product is classified with the hazard statements H317 category 1A, H334, H340, H350, H360, EUH059 or H420.  or  The product contains ≥ 0.1% of substances in the product that are classified with the hazard statements H317 category 1A, H334, H340, H350, H360, EUH059 or H420.  or  The product contains ≥ 0.1% of substances listed as PBT/vPVB substances in the PRIO database or in the ECHA database, C & L Inventory  or  The product contains ≥ 0.1% of PFAS  or  The product contains ≥ 0.01% of cadmium or cadmium compounds  or  The product contains 2.5 mg per kg (i.e.0.00025 %)³ of mercury or mercury compounds	U	Yes, for lead, mer- cury and cadmium	See the PRIO-criteria for phase-out substances.

<sup>&</sup>lt;sup>3</sup> Applies exclusively to deliberate additions of mercury.

Nr	Properties/substance groups	Conditions	U/R <sup>2</sup>	Summa- tion of substance quantities	References
C2	Phase-out substances – other products	The product contains $\geq 0.1\%$ of substances in the product that are classified with the hazard statements H317 category 1A, H334, H340, H350, H360, EUH059 or H420.  or  The product contains $\geq 0.1\%$ of substances listed as PBT/vPVB substances in the PRIO database or in the ECHA database, C & L Inventory  or  The product contains $\geq 0.1\%$ of PFAS  or  The product contains $\geq 0.01\%$ of cadmium or cadmium compounds  or  The product contains $\geq 0.01\%$ of cadmium or cadmium compounds	U	Yes, for lead, mer- cury and cadmium	See the PRIO-criteria for phase-out substances.
C3	Endocrine disruptors – chemical and other products	cury or mercury compounds.  The product contains ≥ 0.1% of substances in the product that are included in the European Commission's EDS Database of endocrine disruptors, categories 1 and 2, in the Chemsec SIN List and in the ECHA candidate list of substances of very high concern for Authorisation due to endocrine disrupting properties in accordance with REACH Article 57f.	U	_	Endocrine disruptors are phase-out substances according to the PRIO-criteria.
C4	Very high acute toxicity – chemical products	The product is classified with the hazard statements H330, H310, H300 or H370.	R	_	See the PRIO-criteria for priority risk-reduction substances.
<b>C</b> 5	Very high acute toxicity – other products	The product contains $\geq$ 1% of substances in the product classified with the hazard statements H330, H310, H300 or H370.	R		See the PRIO-criteria for priority risk-reduction substances.

<sup>&</sup>lt;sup>4</sup> Applies exclusively to deliberate additions of mercury.

Nr	Properties/substance groups	Conditions	U/R <sup>2</sup>	Summa- tion of substance quantities	References
C6	Allergenic – chemical products	The product is classified with the hazard statements H317 (skin sensitization category 1 or 1B).	R	_	See the PRIO-criteria for priority risk-reduction substances.
С7	Allergenic – other products	The product contains $\geq$ 1% of substances in the product classified with the hazard statement H317 (skin sensitization Category 1 or 1B).	R	_	See the PRIO-criteria for priority risk-reduction substances.
C8	Specific organ toxicity after repeated exposure, category 1, (STOT RE 1) – chemical products	The product is classified with the hazard statement H372.	R	_	See the PRIO-criteria for priority risk-reduction substances.
С9	Specific organ toxicity after repeated exposure, category 1, (STOT RE 1) – other products	The product contains $\geq$ 1% of substances in the product classified with the hazard statement H372.	R	-	See the PRIO-criteria for priority risk-reduction substances.
C10	Mutagenic – category 2 - chemical products	The product is classified with the hazard statement H341.	R	_	See the PRIO-criteria for priority risk-reduction substances.
C11	Mutagenic – – category 2 - other products	The product contains ≥ 1% of substances in the product classified with the hazard statement H341.	R	_	See PRIO-criteria for priority risk-reduction substances.
C12	Environmentally hazardous, long-term aquatic hazard - Aquatic Chronic Category 1 – chemical products	The product is classified with the hazard statement H410.	R	-	See the PRIO-criteria for priority risk-reduction substances.
C13	Environmentally hazardous, long-term aquatic hazard - Aquatic Chronic Category 1 – other products	The product contains a sum of substances classified with the hazard statement H410 according to the formula ([H410] $\times$ M-factor) $\geq$ 2.5.	R	Yes	See the PRIO-criteria for priority risk-reduction substances. Classification according to the rules in the regulation (EC) No 1272/2008 for mixtures with chronic (long-term) hazards.
C14	Environmentally hazardous, long-term aquatic hazard - Aquatic Chronic Category 2 – chemical products	The product is classified with the hazard statement H411.		_	Classification according to the rules in the regulation (EC) No 1272/2008 for mixtures with chronic (long-term) hazards.

Nr	Properties/substance groups	Conditions	U/R²	Summa- tion of substance quantities	References
C15	Environmentally hazardous, long-term aquatic hazard - Aquatic Chronic Category 2 – other products	The product contains a sum of sub-stances classified with the hazard statements H410 and/or H411 according to the formula $([H410] \times M\text{-factor} \times 10) + ([H411]) \ge 25.$		Yes	Adapted from the rules for the classification of mixtures with chronic (long-term) hazards, table 4.1.2 of the (EC) No 1272/2008 regulation.
C18	Environmentally hazardous, long-term aquatic hazard - Aquatic Chronic Category 4 – chemical products	The product is classified with the hazard statements H413.	R	_	Classification according to the rules in the regulation (EC) No 1272/2008 for mixtures with chronic (long-term) hazards.
C19	Environmentally hazardous, long-term aquatic hazard - Aquatic Chronic Category 4 – other products	The product contains a sum of sub-stances classified with the hazard statements H410, H411, H412 and/or H413 according to the formula $([H410]) + ([H411]) + ([H412] \text{ or}) + ([H413]) \ge 25.$	R	Yes	Adapted to the rules for the classification of mixtures with chronic (long-term) hazards, table 4.1.2 of the (EC) No 1272/2008 regulation.
C20	Environmentally hazardous, acute aquatic hazard - Aquatic Acute Category 1 – chemical products	The product is classified with the hazard statement H400.		-	Classification according to the rules for the classification of mixtures with acute (short-term) hazards, table 4.1.1 of the (EC) No 1272/2008 regulation.
C21	Environmentally hazardous, acute aquatic hazard - Aquatic Chronic Category 1 - other products	The product contains a sum of substances classified with the hazard statement H400 according to the formula ([H400] x M-factor) ≥ 25.		Yes	Adapted to the rules for classification of mixtures with acute 1 (short-term) hazards, table 4.1.1 of the (EC) No 1272/2008 regulation.
C22	Potentially persistent, bio- accumulative and toxic or very persistent and very bi- oaccumulative (PBT/vPvB) – chemical and other products	The product contains ≥ 1% of substances that fulfil the criteria for PBT/vPvB.	R	-	The criterion applies to substances listed as potential PBT / vPvB substances in PRIO and Suspected PBT / vPvB in the <a href="Draft Community Rolling Action Plan">Draft Community Rolling Action Plan</a> (CoRAP-list).
C23	Substances that may cause harm to breastfed babies – chemical and other products	The product contains $\geq$ 0.1% of a substance classified with the hazard statement H362.	R	_	



Nr	Properties/substance groups	Conditions	U/R²	Summa- tion of substance quantities	References
C24	Carcinogenic Category 2 – chemical products	The product is classified with the hazard statement H351.	R	_	Classification according to the rules for the classification of mixtures in the (EC) No 1272/2008 regulation.
C25	Carcinogenic Category 2 – other products	The product contains ≥ 1% of substances classified with the hazard statement H351.	R	_	Adapted to the rules for the classification of mixtures with carcinogenic properties, table 3.6.2 of the (EC) No 1272/2008 regulation.
C26	Toxic to reproduction— Category 3 — chemical products	The product is classified with the hazard statement H361.	R	_	Classification according to the rules for the classification of mixtures in the (EC) No 1272/2008 regulation.
C27	Toxic to reproduction— Category 2 — other products	The product contains ≥ 3% of substances classified with the hazard statement H361.	R	_	Adapted to the rules for the classification of mixtures with toxic reproduction properties, table 3.7.2 of the (EC) No 1272/2008 regulation.
C28	Specific target organ tox- icity (STOT) — single expo- sure, Category 2 — chemical products	The product is classified with the hazard statement H371.		_	Classification according to the rules for the classification of mixtures in the (EC) No 1272/2008 regulation.
C29	Specific target organ tox- icity (STOT) — single expo- sure, Category 2 — other products	The product contains ≥ 10% of remaining substances classified with the hazard statement H371.		_	Adapted to the rules for the classification of mixtures with specific target organ toxicity properties, table 3.8.3 of the (EC) No 1272/2008 regulation.
C30	Acute toxicity – Category 3 – chemical products	The product is classified with the hazard statements H331, H311 or H301.		-	Classification according to the rules for the classification of mixtures in the (EC) No 1272/2008 regulation.
C31	Acute toxicity – Category 3 – other products	The product contains ≥ 25% of substances classified with the hazard statements H331, H311 or H301.		Yes	Adapted to the rules for the classification of mixtures of acute toxicity in section 4.1, table 1 in the Swedish Chemicals Agency's agency regulation on the classification and labelling of chemical products, KIFS 2005:7.



Nr	Properties/substance groups	Conditions	U/R <sup>2</sup>	Summa- tion of substance quantities	References
C32	Volatile organic compounds  5 – chemical and other products	The product contains ≥ 10% of volatile organic compounds classified with the hazard statements H330, H331, H332, H336, 371 or H373.		Yes	Maximum VOC content limit values for water based paints for interior glossy walls and ceilings (Gloss >25@60°), Phase II, <u>Directive 2004/42/CE of the European Parliament and of the Council on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes.</u> Photochemical ozone creation potential according to the UNECE report <u>Protocol to the 1979 convention on long-range transboundary air pollution concerning the control of emissions of volatile organic compounds or their transboundary fluxes.</u>
C33	Very high Global Warming Potential - chemical and other products	The product contains ≥ 0.1% of a fluorinated greenhouse gas with a warming potential (GWP) ≥ 150.	U	_	Fluorinated gases (F-gases) replace certain substances that deplete the ozone layer. The problem with the F-gases is that they contribute to global warming instead. According to the Environmental Protection Agency extremely low emissions may also have a significant impact on the climate.  For reducing F-gas emissions for the purpose of achieving the EU climate change goals and to fulfill the obligations under the Kyoto Protocol, the European Parliament and the Council of the EU have adopted the Regulation (EC) No 842/2006 on certain fluorinated greenhouse gases (F-gas).

<sup>&</sup>lt;sup>5</sup> Volatile organic compound (VOC) means any organic compound having an initial boiling point less than or equal to 250°C measured at a standard pressure of 101.3 kPa, according to the definition provided in the EU Directive 2004/42/CE.

Nr	Properties/substance groups	Conditions	U/R <sup>2</sup>	Summa- tion of substance quantities	References
C34	Hazardous waste - chemical and other products	The product results in hazardous waste during the demolition phase.			One major challenge is the fact that a large amount of the waste generated each year – some 100 million tons – is hazardous, containing heavy metals and other toxins. The EU is working to reduce the hazardous materials used in products which then end up in our waste, as well as ensuring that hazardous waste is dealt with in the safest way possible. The EU's approach to waste management.
C35	Endangered plant species - other products	The product contains > 2% of a plant species on the <u>CITES-list</u> of endangered species.		_	Within the EU, CITES has been applied through a special law. See the council regulation (EC) No 338/97 on the protection of species of wild fauna and flora by regulating trade therein.
C36	Formaldehyde	More than 2% formaldehyde has been used for the manufacture of this product and it does not comply with formaldehyde E1 requirement in accordance with ISO 16000-9:2006 or CEN/TS 16516 or EN 717-1 or CDPH Standard Method v1.1 or information on its formaldehyde emission is missing  Applies to glued wood material (such as wood panels, chipboard, MDF, OSB and plywood), wooden floors, laminated floors and mineral wool insulation.		-	B assessments are possible for products containing formaldehyde-emitting materials that meet E1.  A common indoor pollutant with a wide range of sources. Formaldehyde at low concentrations causes irritation of the eyes and respiratory tract for many individuals. It is classified as a carcinogen Carc 2 H351 in 1 of the European Parliament and Council Regulation (EC) No 1272/2008.  Emission of formaldehyde from indoor surface materials. Barbara Kolarik, Lars Gunnarsen and Lis Winther Funch. Proceedings of Healthy Buildings 2009.

Nr	Properties/substance groups	Conditions	U/R²	Summa- tion of substance quantities	References
C1+	Phase-out substances during the manufacture phase – chemical and other products	operties that lead to a C- or D but has one or more of the followin  > 2% of a monomer classified with hazard statements that meet the criteria for phase-out substances has been used for the manufacture of this product (e.g. vinyl chloride, butadiene, acrylonitrile, ethylene oxide, propylene oxide and bisphenol A).	g proper	ties:	Due to results from risk assessment and strategies for limiting the risks of vinyl chloride, butadiene, acrylonitrile-butadiene-nitrile and propylene oxide, the European Communities Commission issued a recommendation on special measures to reduce the risks associated with its management (see 2004/394EG and RAR for

Nr	Properties/substance groups	Conditions	U/R <sup>2</sup>	Summa- tion of	References
	8.04.60			substance quantities	
	Special requirements for monomers and manufacturing processes (for certain monomers)	The polymer has no accepted residual monomer certificate (maximum 3 years old) indicating that the following limits have not been exceeded:  > 15 ppm for acrylonitrile > 2 ppm for butadiene > 5 ppm for ethylene oxide and propylene oxide > 50 ppm for bisphenol A  The polymer has no accepted monomer certificate (maximum 3 years old) indicating that the following requirements have been met:  • No lead or cadmium stabilizers have been added to the PVC products. • The PVC-polymer manufacturer(s) have signed a certificate stating that the residual monomer content of vinyl chloride in their PVC does not exceed 1 ppm (according to the voluntary limit agreed by the ECVM member companies in 1995 for food and medical applications).  • The PVC-polymer manufacturer(s) have signed a certificate that certifies (through recurring measurements*) that the level of vinyl chloride monomer in the inhaled air does not exceed the threshold limit value (TLV) of 1 ppm (with reference to the Swedish Work Environment Authority AFS 2015: 7).  • The PVC-polymer manufacturer(s) have signed a certificate that certifies that the mercury method for chlorine production has been phased out, stating which alternative method is used is stated.			B assessments are possible for products containing relevant polymers and that have accepted monomer certificates.



Nr	Properties/substance groups	Conditions	U/R²	Summa- tion of substance quantities	References
A1		operties that lead to C+, C- or D and does not qualify for A.  operties that lead to a C+, C- or D and it fulfills the following  The product does not contain ≥ 0.001% of biocides classified with hazard statements/s for environmental hazards, i.e. the	conditio	ons:	Biocides classified according to the rules for the classification of mixtures in the (EC) No
A2	ucts	hazard statements H400, H410, H411 or H412.			1272/2008 regulation.
A2	Phase-out substances during the manufacture phase  - chemical and other products	The product does not contain > 2% of a monomer classified with s that meet the criteria for phase-out substances has been used for the manufacture of this product. (E.g. vinyl chloride, butadiene, acrylonitrile and propylene oxide).		_	Due to results from risk assessment and strategies for limiting the risks of vinyl chloride, butadiene, acrylonitrile-butadiene-nitrile and propylene oxide, the European Communities Commission issued a recommendation on special measures to reduce the risks associated with its management (see 2004/394EG and RAR for other substances).
	Formaldehyde – wood products containing formaldehyde adhesives.	Meets the E0 standard for formaldehyde emissions with the following limits: $ \leq 4,0 \text{mg}/100 \text{ g [EN 120-standard]}, \\ \leq 0,050 \text{ mg} \cdot \text{m}^{-3} \text{ luft [EN 717-1 standard]}, \\ \leq 0,051 \text{ ppm [ASTM E 1333-standard]}, \\ \leq 0,4 \text{ mg} \cdot \text{L}^{-1} \text{ [JIS A 1460-standard]}. $		_	"A" assessments are possible for products containing formaldehyde-emitting materials that meet the E0 standard.  A common indoor pollutant with a wide range of sources. Formaldehyde at low concentrations causes irritation of the eyes and respiratory tract for many individuals. It is classified as a carcinogen Carc 2 H351 in 1 of the European Parliament and Council Regulation (EC) No 1272/2008.  Emission of formaldehyde from indoor surface materials. Barbara Kolarik, Lars Gunnarsen and Lis Winther Funch. Proceedings of Healthy Buildings 2009.

Nr	Properties/substance groups	Conditions	U/R²	Summa- tion of substance quantities	References
А3	Environmentally hazardous, generally – chemical and other products	The product does not contain ≥ 0.1% of substances hazardous to the environment, i.e. the hazard statements H400, H410, H411, H412, H413 or H420.		_	Classification according to the rules for the classification of mixtures in the (EC) No 1272/2008 regulation.
A4	Environmentally hazardous, long-term aquatic hazard - Aquatic Chronic Category 3 – chemical products	The product is not classified with the hazard statement H412.		-	Classification according to the rules in the regulation (EC) No 1272/2008 for mixtures with chronic (long-term) hazards.
A5	Environmentally hazardous, long-term aquatic hazard - Aquatic Chronic Category 3 – other products	The product does not contain a sum of sub-stances classified with the hazard statements H410, H411 and/or H412 according to the formula  ([H410] x M-factor x 100) + ([H411] x M-factor x 10) + ([H412])  ≥ 25.		Yes	Adapted to the rules for the classification of mixtures with chronic (long-term) hazards, table 4.1.2 of the (EC) No 1272/2008 regulation.
A6	Environmentally hazardous and hazardous to health – chemical products	The product is not classified as hazardous to health or the environment.		-	Classification according to the rules for the classification of mixtures in the (EC) No 1272/2008 regulation.
A7	Environmentally hazardous and hazardous to health – other products	The product does not contain $\geq$ 1% of substances classified with the hazard statements $\geq$ H300.		-	Classification according to the rules for the classification of mixtures in the (EC) No 1272/2008 regulation.



Nr	Properties/substance groups	Conditions	U/R <sup>2</sup>	Summa- tion of substance quantities	References
A8	Volatile organic compounds  6 – chemical products	The product does not contain > 1% of volatile organic compounds classified with the hazard statements H330, H331, H332, H336, H371 or H373.		Yes	In line with phase II, <u>Directive 2004/42/CE of the European Parliament and of the Council on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes.</u> Photochemical ozone creation potential according to the UNECE report <u>Protocol to the 1979 convention on long-range transboundary air pollution concerning the control of emissions of volatile organic compounds or their transboundary fluxes.</u>
A9	Hazardous waste – chemical and other products	The product does not produce hazardous waste during the demolition or construction phase and does not lead to landfill waste.		-	_
A10	Waste management – chemical and other products	The product can be recycled, reused, energy recycled, or contains > 50% renewable material. If only landfill deposition is specified for product disposal, it will be assumed to lack rapidly renewable, recyclable, energy recoverable or reusable material.  The absence of information on waste management will prevent the product from an "A" assessment.			_
A11	Technical service life – other products	Service life ≥ 25 years. Exclusively for products categorized with the following BSAB-codes: D, F, K, M		_	_

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<sup>&</sup>lt;sup>6</sup> Volatile organic compound (VOC) means any organic compound having an initial boiling point less than or equal to 250°C measured at a standard pressure of 101.3 kPa, according to the definition provided in the EU Directive 2004/42/CE.



Nr	Properties/substance groups	Conditions	U/R²	Summa- tion of substance quantities	References
A12	Endangered plant species – other products	The product does not contain any plant species found on the CITES-list of endangered species.		_	Within the EU, CITES has been applied as a special law. See the council regulation (EC) No 338/97 on the protection of species of wild fauna and flora by regulating trade therein.
A13	Product transparency – chemical and other products	Complete documentation according to table 1. The product content has been published. The product does not contain confidential information above the amount specified in Table 1.		_	In order to obtain a good basis for fair assessments and to enhance the transparency regarding the contents of the products.